

AMENDMENT UNDER 37 C.F.R. §1.111
APPLICATION NO. 09/462,415
ATTORNEY DOCKET NO. Q57408

REMARKS

Claims 1-19 are all the claims pending in the application. Independent claims 1 and 18 have been amended so as more clearly to define the claimed subject matter. No new matter has been added, and support for the claim amendments can be found, e.g., at page 7, lines 35-37, and also page 12, line 6 of the originally-filed specification.

The Examiner rejected claims 1-14 and 17-19 under 35 U.S.C. § 103(a) as being unpatentable over Ishida et al (USP 5,926,466) in view of Yandrofski et al. (USP 6,205,340 B1). Of these claims, only claims 1 and 18 are independent. In general, these independent claims require that the filter stages are bandpass for the receive frequency band and moderately rejecting in the transmit band, that the filter stages alternate with the amplifier stages, and that the filters have approximately the same center frequency and bandwidth.

Ishida does not meet these requirements. Yandrofski does not compensate for this deficiency of Ishida because it does not teach or suggest any of the foregoing claim features. In Ishida, the filters operate at different frequencies, and do not have approximately the same center frequency and bandwidth, and Yandrofski does not teach any modification to Ishida that would result in the invention set forth in either of claims 1 or 18, or any of their dependent claims.

Applicant therefore respectfully requests the Examiner now to reconsider this rejection in the light of the claim amendments presented herein, and to allow the claims over the combined teachings of Ishida and Yandrofski. Even taken for what they would have meant as a whole to an artisan of ordinary skill, the Ishida/Yandrofski combination would not have led such a person to the subject matter of the present invention as now defined by the claims.

The Examiner rejected claims 15-16 under 35 U.S.C. § 103(a) as being unpatentable over over Ishida et al (USP 5,926,466) in view of Yandrofski et al. (USP 6,205,340 B1) in view of Chung (USP 6,297,774 B1). Chung is relied on for only its teaching of microstrip or suspended triplate technology. Chung does not compensate for the above-identified deficiencies of the Ishida / Yandrofski combination vis-à-vis independent claim 1, and therefore the Ishida / Yandrofski / Chung combination cannot reasonably be said to render obvious the subject matter

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of dependent claims 15 or 16. For the reasons presented above with respect to independent claim 1, therefore, Applicant respectfully submits that dependent claims 15 and 16 also patentably distinguish over the combined teachings of Ishida, Yandrofski, and Chung, taken alone or in any combination. Applicant therefore respectfully requests the Examiner to withdraw this rejection of dependent claims 15 and 16.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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APPENDIX

VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

The claims are amended as follows:

1. (Amended three times) A circuit for receiving microwaves, the circuit comprising:
radiating means for receiving microwaves,
filter means for eliminating microwaves transmitted at different frequencies by the radiating means, and
means for amplifying received microwaves;
wherein:

a first frequency band for receiving microwaves defines a receive frequency band of the circuit, and a second frequency band for transmitting microwaves defines a transmit frequency band of the circuit,

the filter means and means for amplifying include at least two filter and amplifier stages connected to the radiating means,

the filter stages comprise a planar filter and the amplifier stages comprise an amplifier, the filter stages alternate with the amplifier stages, there being a filter for each amplifier, the planar filter has, as a reactivity for transmit frequencies, a fraction of the total rejection needed to eliminate the transmit frequencies is a bandpass filter for the receive frequency band with low attenuation for microwaves of the receive frequency band,

the planar filter has a moderate reactivity for the microwaves of the transmit frequency band,

the amplifier has, as a gain, a fraction of the total gain of the circuit, and

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all of the filters have at least approximately the same center frequency and bandwidth,
and
said filter and said amplifier stages apply progressive filtering and amplification.

18. (Amended two times) A method of receiving microwaves via radiating means, comprising:

~~in which method filtering filtering eliminates microwaves, transmitted at different frequencies in a transmit frequency band by the radiating means; and~~
~~amplifying microwaves received in a receive frequency band; the waves received are amplified, characterized in that~~

wherein:

the filtering and amplification are progressive,
the first filtering stage, starting from the radiating means, uses a planar filter with a bandpass for the receive frequency band and with moderate rejectivity for the microwaves of the transmit frequency band, whose rejectivity is a small fraction of that needed to eliminate transmit frequencies throughout the corresponding system
and

the first stage amplifier gain is a small fraction of the total necessary gain,
the filters performing the filtering have at least approximately the same center frequency and bandwidth, and
the filtering and amplifying are performed alternately, there being a filtering for each amplification.